



STORAGE

Storage of Grinding Wheels :

Grinding wheels must be handled with extreme care and great importance should also be given to the method of storing them. A grinding wheel, if handled or stored badly, can cause serious problems when in operation.

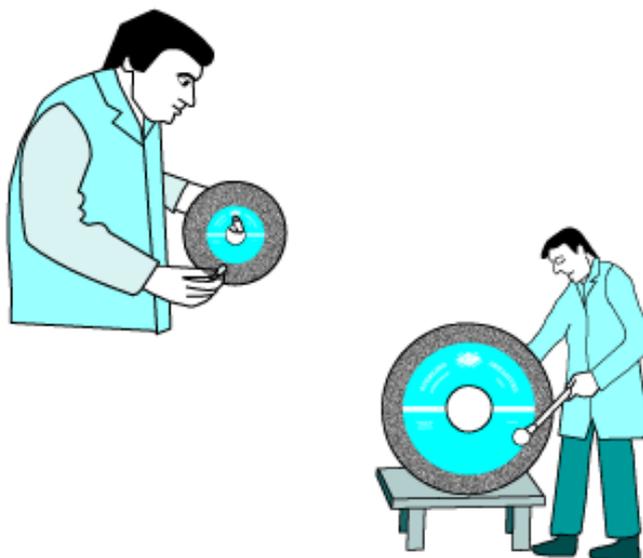
Given below are a few basic guidelines in handling and storing of grinding wheels :

On receipt of a wheel :

When you receive a grinding wheel, first check to see if the wheel shows any sign of damage, such as chipping, cracking or discolouration. If the wheel has any one of these problems, then it is definitely damaged. Just reject the wheel.

Ring Test :

A ring test should always be conducted on receipt of a grinding wheel as well as before mounting it. This is mainly done to detect if there is any damage to the wheel. While conducting the ring test, small wheels should be held with the fore finger inside the bore while large wheels should be placed on a stand or support as shown in the figure.

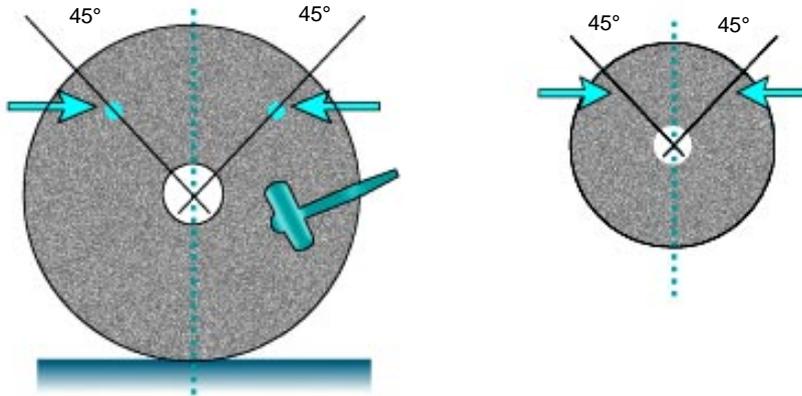


The wheel should be tapped lightly with a non metallic implement like a screw driver handle in case of small wheels or a wooden mallet in the case of heavier wheels.

Ring Test :

While conducting the ring test, tap the wheel on either side at 45° of its vertical axis and at 1" or 2" from its periphery. Rotate the wheel again to 45° and repeat the test till the entire circumference of the wheel is covered. A good wheel will give a clear ring while a cracked or damaged wheel will produce a dull sound. The wheel giving a dull sound should not be used.



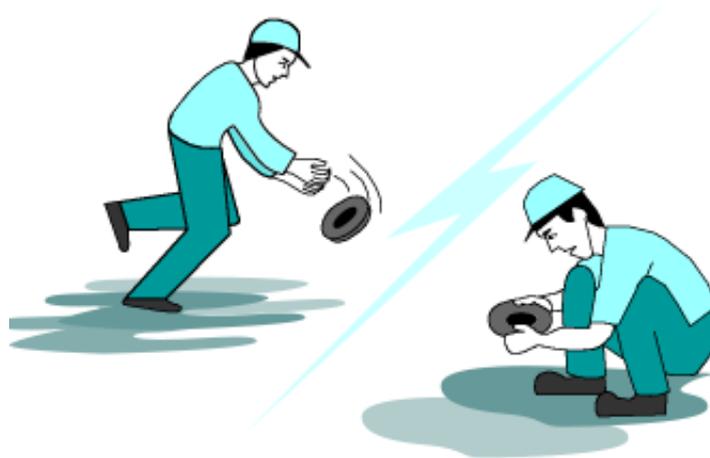


A ring test should be held in a place where the 'ring' can easily be heard. It should be conducted only by a person qualified or skilled enough to interpret the result.

Wheel handling :

Grinding wheels can also be damaged by mis-handling. This can be during transportation or when they are moved from one place to another within the workplace.

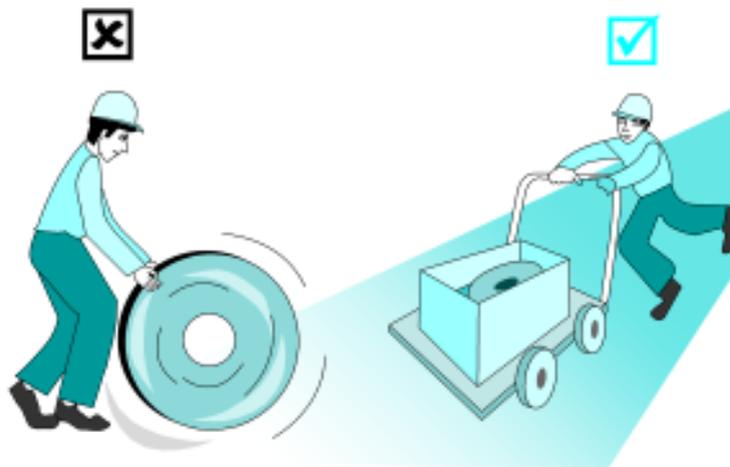
- Never drop a grinding wheel. This is a major cause for most wheel damages. In case, you do drop a wheel by mistake, check immediately to see if it is damaged or not. A cracked grinding wheel should be discarded since it can seriously injure the operator while in use.





Wheel handling :

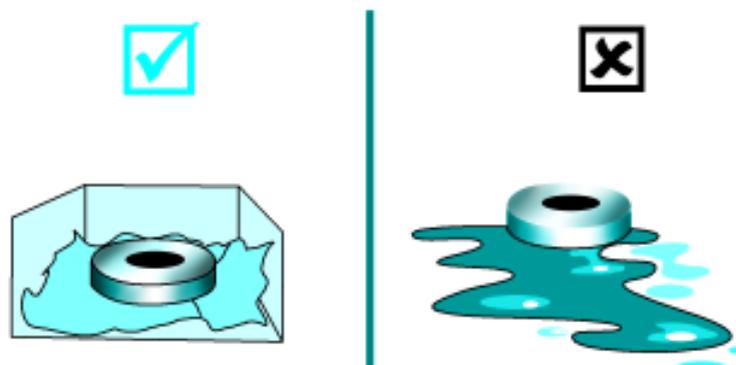
- Never pile other objects on top of stacked grinding wheels.
- Never roll a grinding wheel on the floor.
- Use trucks or suitable conveyors to move a grinding wheel from one place to another.



- Never bang a grinding wheel against any other object. This may chip or break the wheel. Also, any shock applied to a grinding wheel can cause a crack in the wheel which may not be visible to the naked eye. These kind of invisible cracks can result in a wheel breakage, due to centrifugal forces applied when the wheel is in motion.

Rules for Grinding Wheel Storage

- Grinding wheels should be stored in a dry place and not exposed to humidity, water or other liquids.





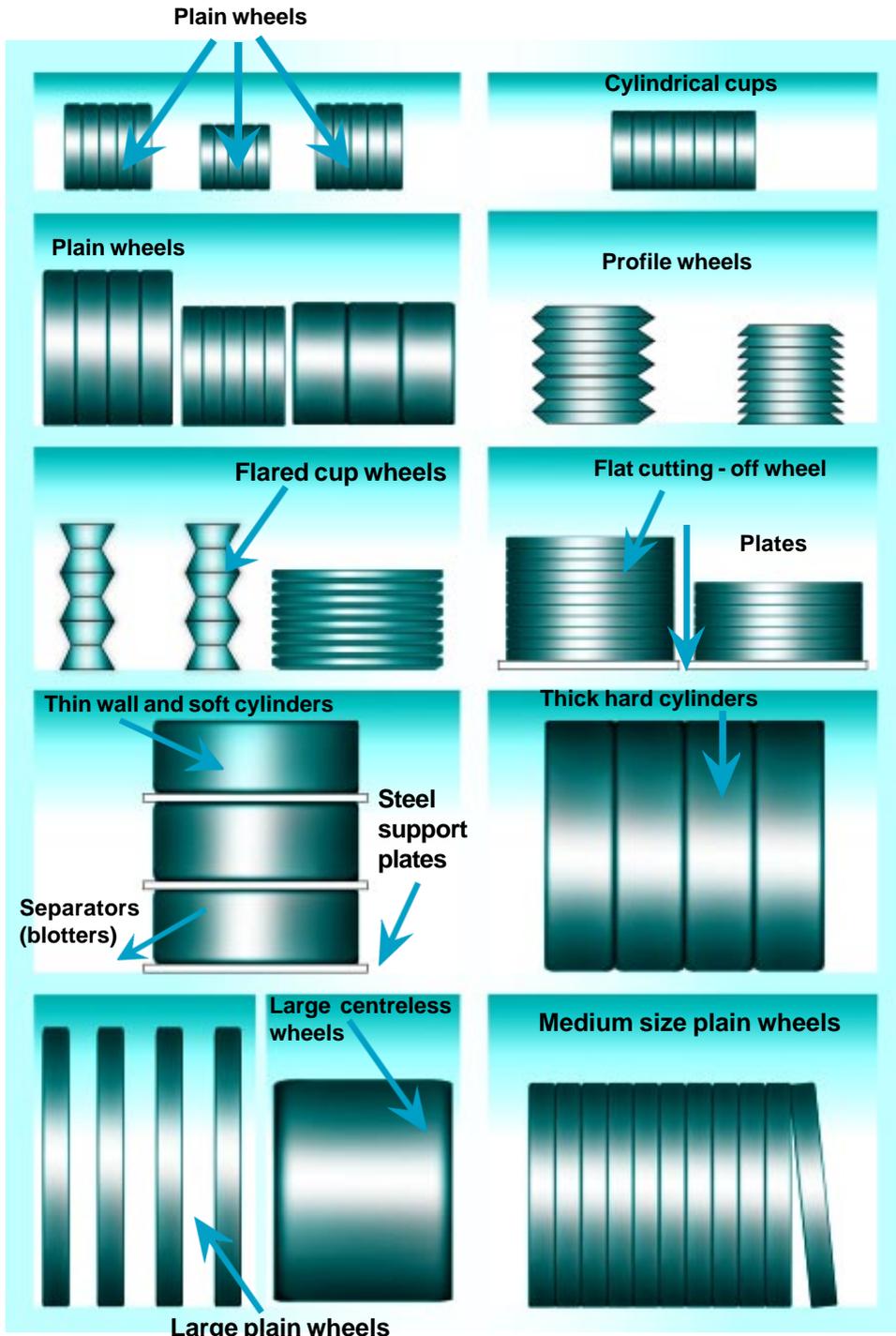
Rules for Grinding Wheel Storage

- Wheels should not be exposed to freezing temperature conditions.
- Subjecting wheels to any extreme fluctuations in temperature should also be avoided. For instance, avoid any sudden variance in temperature that can cause condensation on the wheels when moving them from storage to an area of high temperature conditions.
- The outer surface of certain rubber, resinoid, shellac and magnesite wheels may be affected by oxidation if the wheels are stored for a long period. These wheels should not be stored beyond two years. Careful monitoring of stock is also required to ensure that earlier stocked wheels are used first. However, vitrified grinding wheels can be stored for any period of time.
- Grinding wheels should be stored in racks or bins in such a way so as to prevent any damage to them. While removing a wheel, the adjacent wheels should not be disturbed.

The method for storing a grinding wheel varies according to the wheel type :

- Flat cutting-off wheels should be placed without anything between them, on a flat surface of steel or a similar rigid material to prevent warpage.
- Thin wall, soft grade cylinder wheels (Type 2), cup wheels (type 6), dish wheels (type 12) and saucer wheels (type 13) should be stored on flat sides with blotters or cushioning material between them.
- Thick rim, hard grade cylinder wheels, straight cup wheels and also medium sized plain wheels may be stored on their periphery.
- Soft grade straight cup wheels and taper cup wheels (type 11) are best stored base to base, on the opposite way to the other, to prevent chipping of the edges and cracking of the walls.
- Large, plain and centreless wheels (Types 1, 3 to 5, 7, 9, 20 to 26, 35 & 37) of considerable thickness have to be made to stand on their sides in the racks and so positioned that they do not move or roll.
- Small wheels, upto 80 mm, mounted wheels and points, inserted nut cones (Type 16 to 19) may be stored in appropriate sized boxes, bins or drawers.





Rack design suitable for storing a wide variety of grinding wheels

